APR 0 Under the P	ADEMARKA Reduction Act of 1995, no	person		t and T	PTO/SB/21 (08-03) Approved for use through 08/30/2003. OMB 0651-0031 Trademark Office; U.S. DEPARTMENT OF COMMERCE oformation unless it displays a valid OMB control number. 08,603	
T	RANSMITTAL		Filing Date	03/14/	1/2004	
	FORM		First Named Inventor	Sze-K	Ke Wang	
ito be used for	all correspondence after initial filing	1)	Art Unit			
			Examiner Name			
Total Number o	f Pages in This Submission		Attorney Docket Number	ОТМР	P0066USA	
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Amendm Amendm A A Extension Express Informati Certified Docume Respons Incomple	smittal Form ee Attached ent/Reply Ifter Final Iffidavits/declaration(s) In of Time Request Abandonment Request on Disclosure Statement Copy of Priority		Drawing(s) Licensing-related Papers Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence Addre Terminal Disclaimer Request for Refund CD, Number of CD(s)		After Allowance communication to Technology Center (TC) Appeal Communication to Board of Appeals and Interferences Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) Proprietary Information Status Letter Other Enclosure(s) (please Identify below):	
	SIGNATU	REC	OF APPLICANT, ATTORN	EY, (OR AGENT	
Firm or	Winston Hsu, Reg. No	: 41,	526			
Individual name	1	, -			- · · · · · · · · · · · · · · · · · · ·	
Signature Winshon Hais						
Date 4/5/2014						
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sufficient postag the date shown l	I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.					
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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Date

PTO/SB/17 (10-03) Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE work Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

(\$) 0.00

Complete if Known				
Application Number	10/708,603			
Filing Date	03/14/2004			
First Named Inventor	Sze-Ke Wang			
Examiner Name				
Art Unit				
Attorney Docket No.	OTMP0066USA			

METHOD OF PAYMENT (check all that apply)		FEE CALCULATION (continued)					
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Deposit Account:			ntity	Small	Entity		
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Account North America International Patent Office						cover sheet	
The Director is authorized to: (check all that apply)		053	130	1053		Non-English specification	
Charge fee(s) indicated below Credit any overpaymen	115		2,520			For filing a request for ex parte reexamination	
Charge any additional fee(s) or any underpayment of fee(s)		804	920*	1804	920	Requesting publication of SIR prior to Examiner action	
Charge fee(s) indicated below, except for the filing fee	18	805	1,840*	1805	1,840*	Requesting publication of SIR after	
to the above-identified deposit account.		251	110	2251	55	Examiner action Extension for reply within first month	0.00
FEE CALCULATION		251 252	420	2252	210	Extension for reply within first month Extension for reply within second month	
1. BASIC FILING FEE		252 253	950	2252	475		
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Code (\$) Code (\$)						Extension for reply within fourth month Extension for reply within fifth month	
1001 770 2001 385 Utility filing fee			2,010	2255	•		
1002 340 2002 170 Design filing fee	1 1	401	330	2401		Notice of Appeal	
1003 530 2003 265 Plant filing fee		402	330	2402		Filing a brief in support of an appeal	
1004 770 2004 385 Reissue filing fee		403 454	290	2403		Request for oral hearing	
1005 160 2005 80 Provisional filing fee	77 (7)		1,510	1451		Petition to institute a public use proceeding	
SUBTOTAL (1) (\$) 0.00		452	110	2452		Petition to revive - unavoidable	3
2. EXTRA CLAIM FEES FOR UTILITY AND REISS	HE		1,330	2453		Petition to revive - unintentional	
Fee from Extra Claims below Fee P		501 502	1,330 480	2501 2502		Utility issue fee (or reissue)	
Total Claims		502 503	640	2502		Design issue fee Plant issue fee	
Independent - 3** = X = X		460	130	1460		Petitions to the Commissioner	
Multiple Dependent =		807	50	1807			
Large Entity Small Entity		806	180			Processing fee under 37 CFR 1.17(q) Submission of Information Disclosure Stmt	
Fee Fee Fee Fee Description	1			1806			
Code (\$) Code (\$) 1202 18 2202 9 Claims in excess of 20	8	021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1201 86 2201 43 Independent claims in excess of 3	₃ 18	809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1203 290 2203 145 Multiple dependent claim, if not page		810	770	2810	385	For each additional invention to be	
1204 86 2204 43 ** Reissue independent claims		J 1 U	,,,			examined (37 CFR 1.129(b))	
over original patent	1	1801	770	2801	385	Request for Continued Examination (RCE)	
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent	1	802	900	1802	900		
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**or number previously paid, if greater; For Reissues, see above	0					30Β101AL (3) (Φ) 8:30	
SUBMITTED BY				A! - A -		(Complete (if applicable))	ь.
Vame (Print/Type) Winston Hsu / Registration No. 41,526 Telephone 886289237350							

Signature Date

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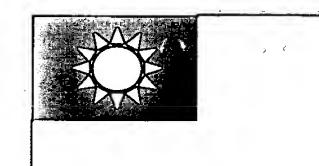
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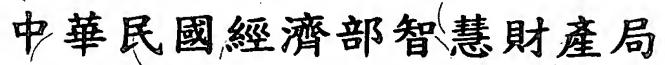
DECLARATION — Supplemental Priority Data Sheet

Additional foreign applications:					
Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES NO	
092205806	Taiwan R.O.C	04/09/2003			
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Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



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INTELLECTUAL PROPERTY OFFICE MINISTRY OF ECONOMIC AFFAIRS REPUBLIC OF CHINA

茲證明所附文件,係本局存檔中原申請案的副本,正確無訛,其申請資料如下:

This is to certify that annexed is a true copy from the records of this office of the application as originally filed which is identified hereunder:

申 請 日: 西元 2003 年 04 月 09 日 Application Date

申 請 案 號: 092205806(Application No.

리머 리마 이미 리마 리마 리마 리마 테마 테마 되면 되면

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申 請 人:中強光電股份有限公司 Applicant(s)

> 局 Director General



發文日期: 西元 <u>2004</u> 年 <u>1</u> 月 12 日 Issue Date

發文字號: 09320040520

Serial No.

5만 5만

申請日期:	IPC分類	
申請案號:		

(以上各欄	新型專利說明書						
	中文	可調色溫之投影裝置					
新型名稱	英文	Color temperature adjustable projection apparatus					
	姓 名(中文)	1. 王思克					
-,	姓名(英文)	1. Sze Ke Wang					
創作人 (共1人)	國 籍 (中英文)	1. 中華民國 TW					
		1. 新竹科學工業園區新竹市力行路11號					
	住居所(英文)	1. No 11, Li Hsing Rd, Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C.					
	名稱或 姓 名 (中文)	1. 中強光電股份有限公司					
	名稱或 姓 名 (英文)	1. Coretronic Corporation					
= ,	國 籍 (中英文)	1. 中華民國					
申請人(共1人)	住居所 (營業所) (中 文)						
	住居所 (營業所) (英 文)	1. No 11, Li Hsing Rd, Science-Basèd Industrial Park, Hsinchu, Taiwan, R.O.C.					
	代表人 (中文)	1. 張威儀					
	代表人(英文)	1. Wade Chang					

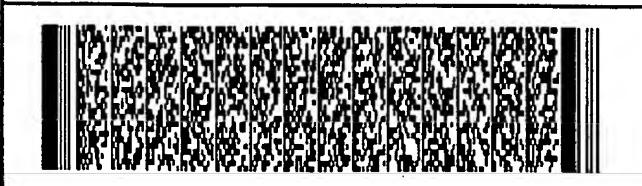


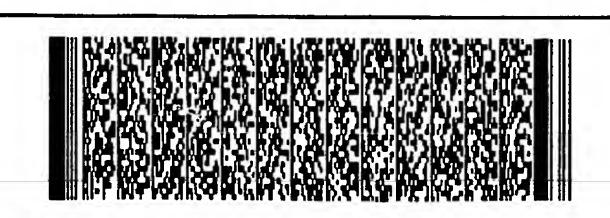
四、中文創作摘要 (創作名稱:可調色溫之投影裝置)

一種可調色溫之投影裝置,主要包括一提供照明光東之光源及一濾光裝置,濾光裝置具有一紅綠及藍濾光區,且藍濾光區上具有不同穿透率之鏡層;利用密透率來調整藍原色光之強度,使色光中藍原色光之的發達到變化色溫且可降低亮度損失,再藉由移動濾光裝置使照明光東投射於濾光裝置之不同位置,來達到調整色溫。

陸、英文創作摘要 (創作名稱:Color temperature adjustable projection apparatus)

A color temperature adjustable projection apparatus comprises a light source for providing a light beam, and a filter apparatus having red, green, and blue segment. The blue segment is coated with various transmittance layers. Varying the intensity of the blue light beam to change the color temperature so that the loss of brightness can be reduced. When the filter apparatus is moved to change the projection position of light beam on the filter apparatus, the transmittance of the blue segment is changed





四、中文創作摘要 (創作名稱:可調色溫之投影裝置)

陸、英文創作摘要 (創作名稱: Color temperature adjustable projection apparatus)

so as to provide adjusting of the color temperature.



四、中文創作摘要 (創作名稱:可調色溫之投影裝置)

伍、(一)、本案代表圖為:第____圖

(二)、本案代表圖之元件代表符號簡單說明:

濾光裝置 22

紅濾光區 221

綠濾光區 222

藍濾光區 223

位置 A、B

陸、英文創作摘要 (創作名稱: Color temperature adjustable projection apparatus)



一、本案已向			
國家(地區)申請專利	申請日期	案號	主張專利法第一百零五條準用 第二十四條第一項優先權
	-		•
·			
二、□主張專利法第一百	「零五條準用第二十	- 五條之一第一項	優先權:
申請案號:			
日期:			
三、主張本案係符合專利	リ法第九十八條第一	-項□第一款但書	或□第二款但書規定之期間
日期:		·	

五、創作說明 (1)

【新型所屬之技術領域】

本創作係有關投影裝置,尤其係指一種可調色溫之投影裝置。

【先前技術】

隨著色溫不同將帶給人不同之視覺感受,例如:低色溫狀態下,讓人感覺較為溫暖,而高色溫狀態下,讓人感覺較為溫暖,而高色溫狀態下,讓人感覺較為清涼,因此,投影顯示裝置能夠提供調整色溫之機制,才能滿足使用者之喜好或不同場合(如:會議簡報、影片觀賞)之視覺需求。

請參閱第1圖所示,習知投影顯示裝置10主要包 括一光源11、一色輪12 (Color Wheel),一積分柱 1 3 (Integrated Rod)、一光閥14 (Light Valve) 及一投影鏡頭15 (Projection Lens),其中色輪12 係由紅(Red,R)、綠(Green,G)及藍(Blue,B)濾 光元件、或由R、G、B及白(White,W) 濾光元件組成一 圆盤狀,藉由光源11產生一照明光束,經色輪12後 依序產生R、G、B色光,再經積分柱13作均勻化處理, 後投射於光閥 1 4 , 透過控制光閥 1 4 之電子訊號,將 達到 整 色溫 温; 當 濾 光 片 整 明光束依序通過色輪 1 濾 光 元 件 之 色 光





五、創作說明 (2)

光閥 1 4 處理後,投射於投影鏡頭 1 5 ,後經濾光片 1 7 將某一波長區段之色光濾除,以變動R、G及B之光譜分布致使色溫改變,再將影像呈現於螢幕 1 6 上,由於所有色光均會經該濾光片 1 7 ,再進行一次濾光處理,使得通過R、G、B及W濾光元件之色光均會有部份被濾除掉,而造成裝置亮度下降。

【新型內容】

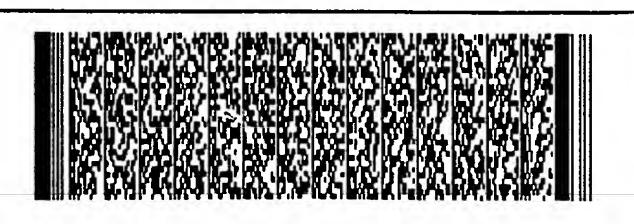
本創作之一目的,係提供一種可調色溫之投影裝置,藉由控制照明光束通過藍濾光區上不同穿透率鍍層,而達到調整裝置色溫。

本創作之另一目的,係提供一種可調色溫之投影裝置,僅利用藍濾光區穿透率變化調整色溫,以減低對裝置亮度之影響。

【實施方式】

有關本創作為達到上述目的,所採用之技術手段及其餘功效,茲舉二較佳實施例,並配合圖式加以說明如下:



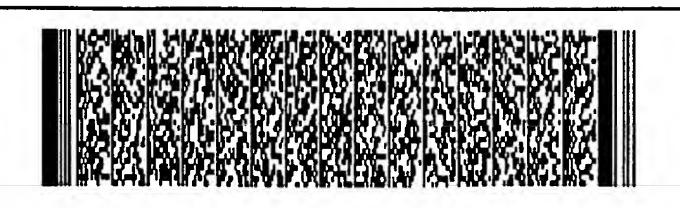


五、創作說明 (3)

請參閱第2圖,本創作可調色溫之投影裝置20主要包括一光源21、一濾光裝置22、一光閥23及一投影鏡頭24;其中該光源21係產生一照明光束束明光束通過濾光裝置22,而依序產生紅、綠及藍之三原色光,後投射於光閥23,透過控制光閥23之電子訊號,將紅、綠及藍連續色光轉為灰階影像,再透過投影鏡頭24將畫面呈現於一螢幕25上。

閱第3圖所示,濾光裝置22條具有至少 1、綠濾光區222及藍濾光區223,以 照明光束中之紅、綠、藍原色光,且該紅濾光區2 與綠濾光區222上為單一穿透率鍍層,藍濾光區 223上以漸層方式設有不同穿透率鍍層,請參閱第4 穿透率由內側向外側減少,另外, 濾光裝置2 2 可為一色輪並連接有一移動裝置(圖 未 示) 以帶動 置22產生線性位移;藉由移動裝置將濾光裝 2 移動至預定位置後,而改變照明光束通過藍濾光區2 23之位置, 隨著藍濾光區223上穿透率改變 穿過藍濾光區223之藍原色光強度產生變化, 光束通過藍濾光[高 產 生強 度高 之藍原 而 之固 清 涼 區之B 域時 80 其 鍍 層 度低之藍原色光 過紅、綠 濾 光





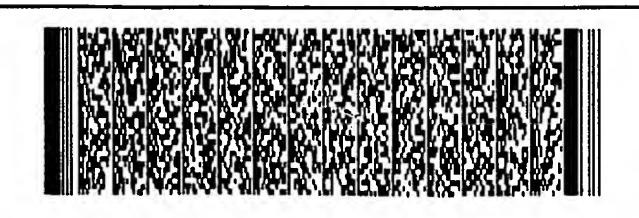
五、創作說明 (4)

22之固定強度紅、綠原色混合,而產生低色溫(即溫暖色光)。

此外,由於紅濾光區221與綠濾光區222上每一位置之穿透率均相同,故當移動裝置改變照明光束投射於濾光裝置22之位置時,除藍原色光強度會變化外,其餘色光(例如:綠原色光及紅原色光)其強度均不受影響,故可減少亮度損失。

另外,色光亮度係為輻射度值與比視感度值之乘積,請參閱第6圖所示,係波長與比視感度之關係圖內期,請參閱第6個所示,係沒長與比視感度之關係圖內期,與一個人類,與490m間之藍色光,其使之影響的一個人對人,與490m間之藍色光光亮度沒數學比例最小,故僅利用改變藍原色光之強度來作色溫數整,可達到較少之亮度損失,而使色溫改變對裝置亮度之影響降至最小。

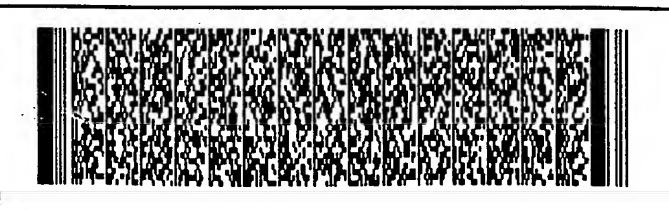


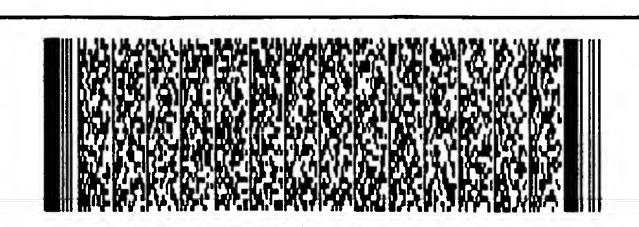


五、創作說明 (5)

由於藍濾光區223其穿透率呈漸層式分布,照明光東投射於其任一區域時均會有不均勻之色光產生,因此可增設一均勻化元件26(如積分柱)於濾光裝置22後端,將不均勻之色光作適當之均勻化處理,而產生均勻之色光投射於光閥23上。

第7圖所示,係本創作另一實施例之濾光裝 參閱 2,該濾光裝置32係具有至少一之紅濾光區 綠濾光區322及藍濾光區323,以濾出照明光 藍原色光,且該紅濾光區 之紅、綠、 3 2 與 3 2 2 上為單一穿透率鍍層 ,藍濾光區32 上分 區域3 2 3 3 2 3 2 , 個] \ 每一 區域323 2分別具有不 同穿透率之鍍層, 其中一 設有高穿透率,另一區域3232 設為低穿透 一區域上323 1或3232之穿透率相 同 濾光裝置32連接有一移動裝置(圖未示)以帶動濾光 1 3 2 沿著各區 2 域 3 3 與 3 2 3 2 作 線性移動。 置而改變照明光束通過藍濾光區32 區323上穿透率改變,而使穿過藍濾 藍濾光 光區323之藍原色光強度產生變化,進而變化色溫 光東通過藍濾光區 3 2 3 之高穿透率區 ,如 C 所示,而產生高強度之藍原色光, 322之固定强度紅、綠原色 而產生高色溫丁甘;而當照明光束通過藍濾光區 3之低穿透率區域3232內時,如D所示,而產





五、創作說明 (6)

生強度低之藍原色光,再通過紅、綠濾光區321、3220固定強度紅、綠原色混合,而產生低色溫TL;而當照明光東投射於高穿透率區域3231與低穿透率區域3231與低穿透率區域3231與低穿透率區域3231與低穿透率區域3231與低穿透率區域3231與低穿透率區域3231所佔比例,而產生一介於TH與TL間之色溫。

以上所述,僅用以方便說明本創作之較佳實施例, 本創作之範圍不限於該等較佳實施例,凡依本創作所做 的任何變更,於不脫離本創作之精神下,皆屬本創作申 請專利範圍。



圖式簡單說明

【圖式簡要說明】

第1圖,係習知投影顯示裝置之光學示意圖。

第2圖,係本創作可調色溫之投影裝置圖。

第3圖,係本創作第一實施例之濾光裝置正視圖。

第4圖,係本創作藍濾光區之穿透率與位置關係圖。

第5圖,係本創作具有白濾光區之濾光裝置正視圖。

第6圖,係波長與比視感度之關係圖。

第7圖,係本創作第二實施例之濾光裝置正視圖。

【圖號簡要說明】

投影裝置 2 0 光源 2 1

綠 濾 光 區 2 2 2

藍 濾 光 區2 2 3白 濾 光 區2 2 4

光 閥 2 3

投影鏡頭2 4螢幕2 5

紅濾光區 321

綠 濾 光 區 3 2 2

藍 濾 光 區 3 2 3



圖式簡單說明

高穿透率區域 3231

低穿透率區域 3232

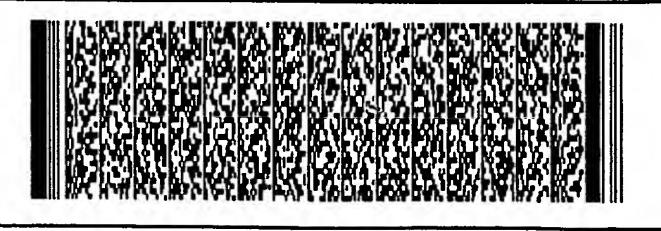
位 置

A · B · C · D · E

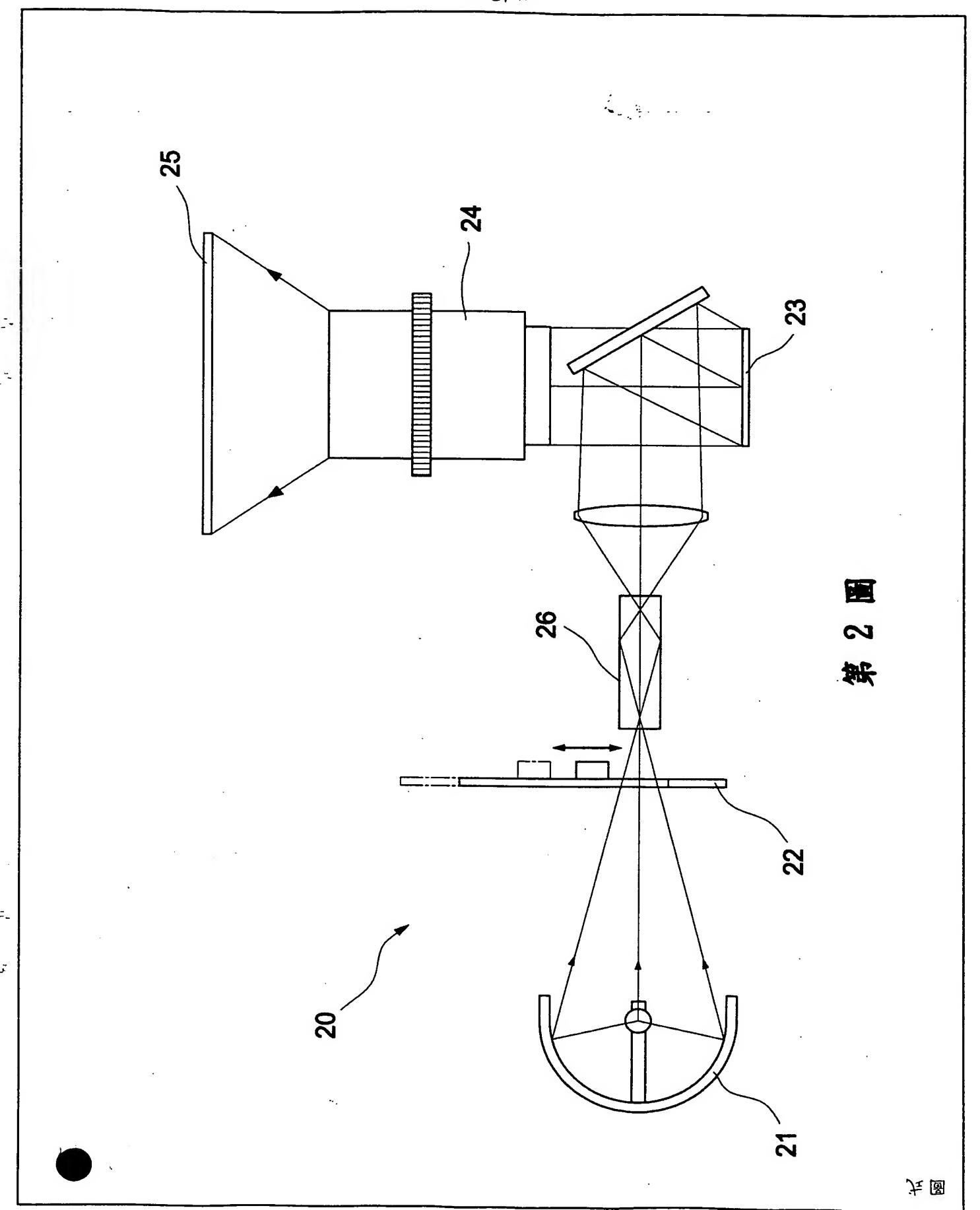


六、申請專利範圍

- 1、一種可調色溫之投影裝置,其包括:
 - 一光源,係產生一照明光束;以及
 - 一濾光裝置,係具有至少一紅濾光區、綠濾光區及藍濾光區,且該藍鴻光區上具有不同穿透率之鍍層,藉由移動該濾光裝置,致使改變照明光束通過藍濾光區之位置,以改變裝置色溫。
- 2、如申請專利範圍第1項所述之可調色溫之投影裝置,其中該不同穿透率之鍍層係以漸層方式分布於該藍濾光區。
- 3、如申請專利範圍第1項所述之可調色溫之投影裝置,其中該藍濾光區可分隔成複數個區域,每一區域具有不同穿透率之鍍層。
- 4、如申請專利範圍第3項所述之可調色溫之投影裝置,其中該照明光東可投射於單一區域內。
- 5、如申請專利範圍第3項所述之可調色溫之投影裝置,其中該照明光東可投射於兩區域間。
- 6、如申請專利範圍第1項所述之可調色溫之投影裝置,其中該濾光裝置更包括一白濾光區。
- 7、如申請專利範圍第1項所述之可調色溫之投影裝置,其中該濾光裝置可為一色輪。
- 8、如申請專利範圍第1項所述之可調色溫之投影裝置,其中該濾光裝置後可裝設一均勻化元件。

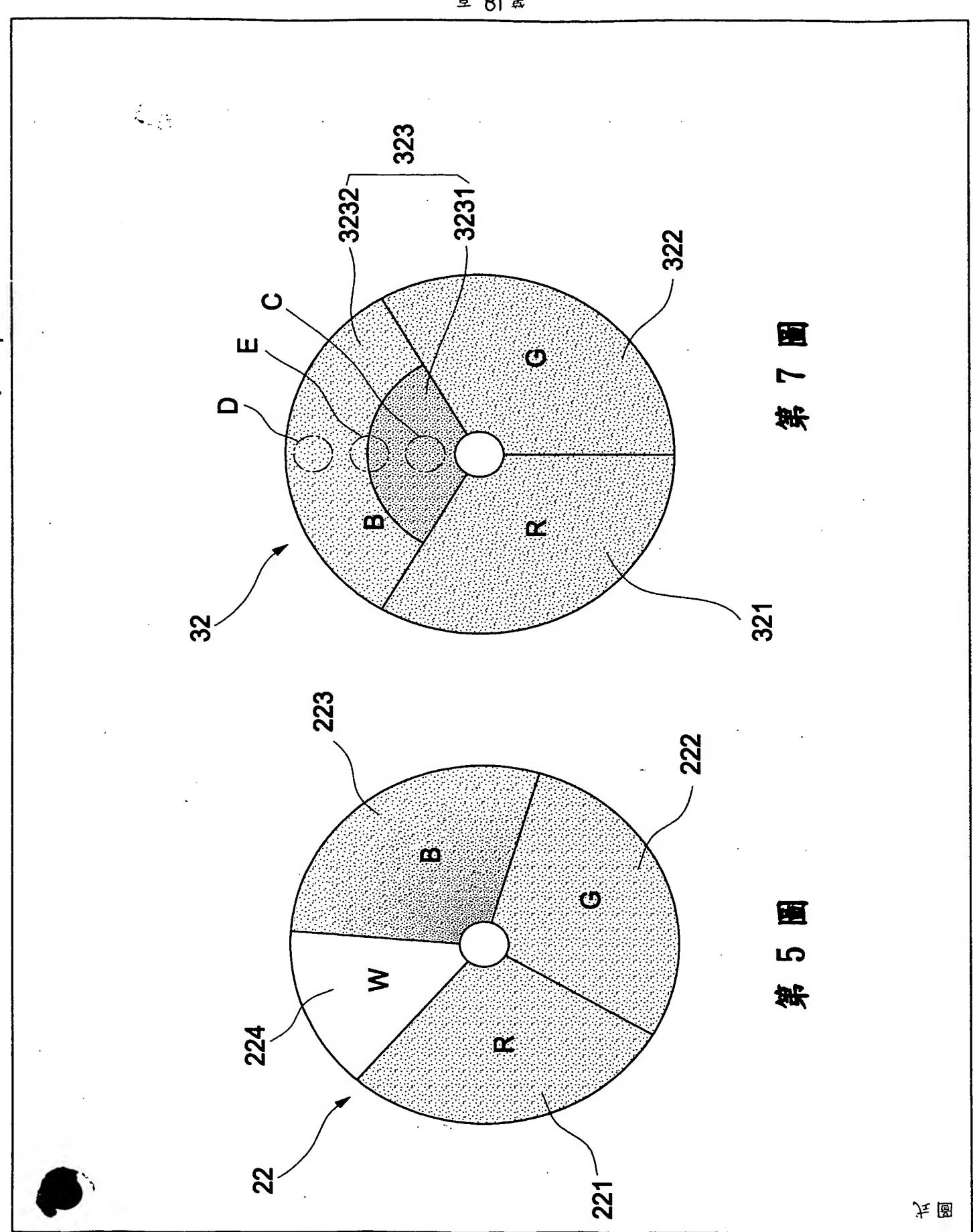


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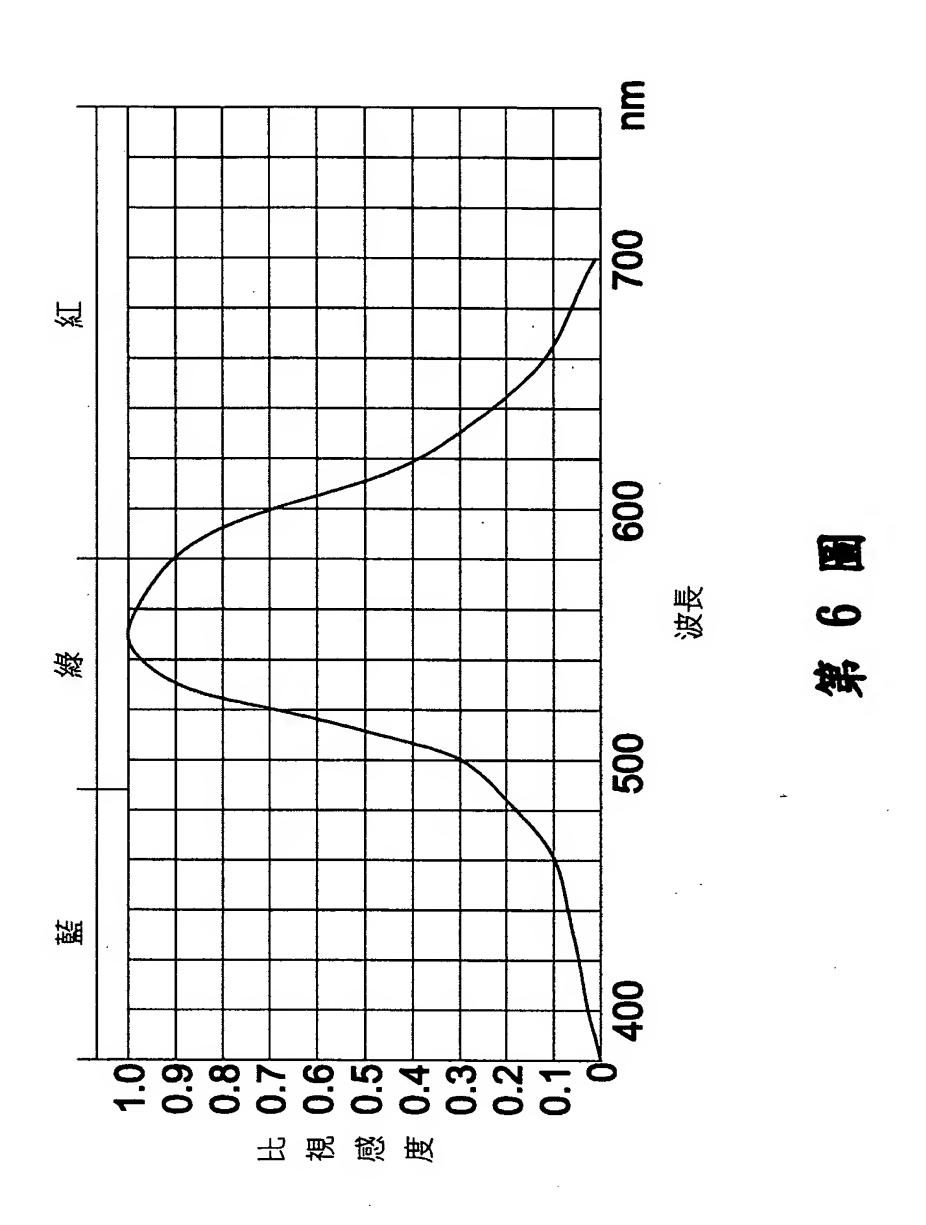


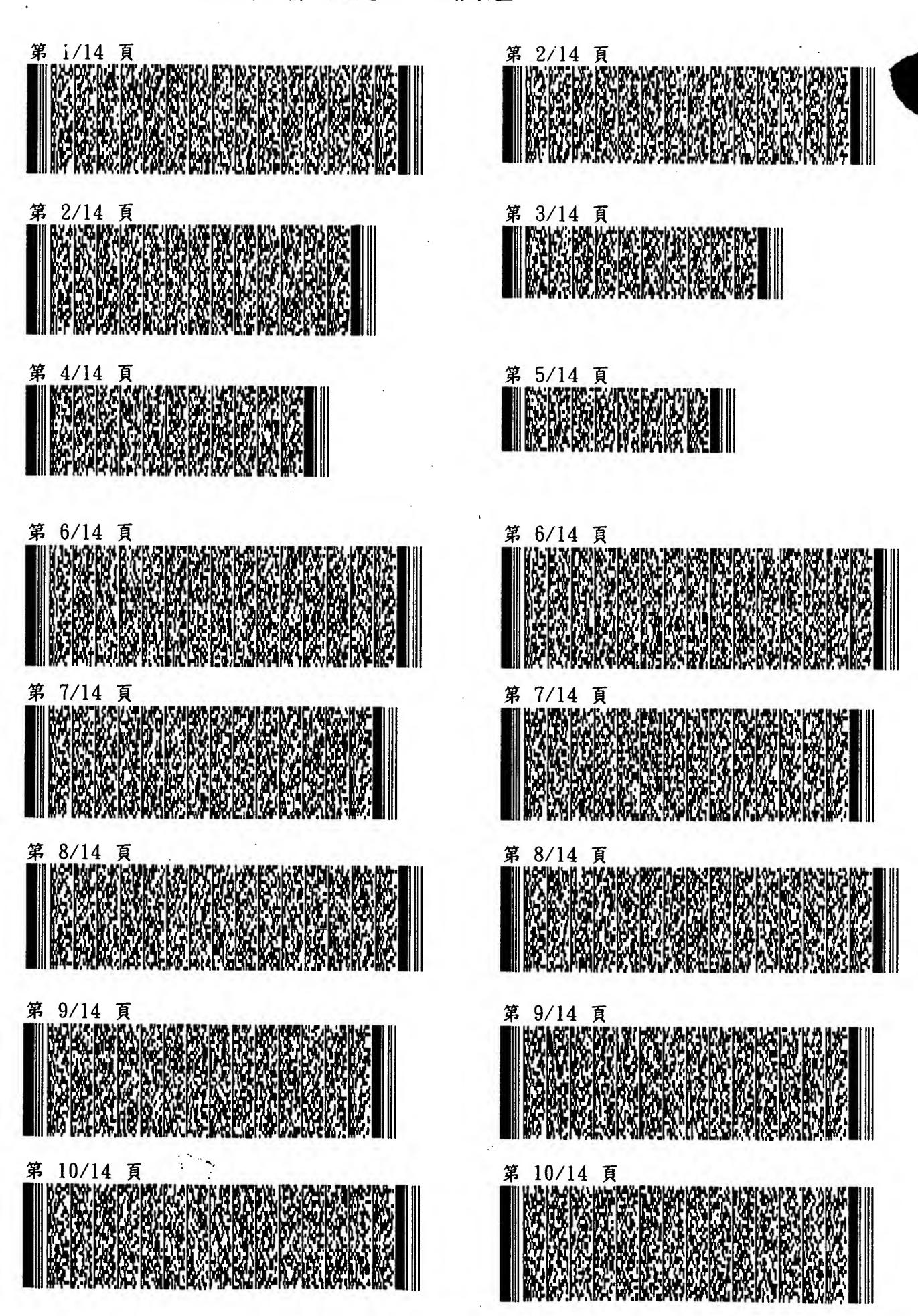
注圖

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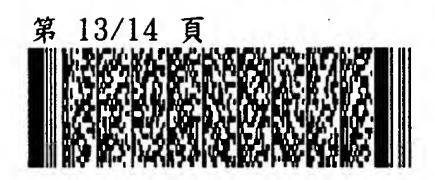
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申請案件名稱:可調色溫之投影裝置







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